

CLAIMS

1. A support place position determination method in a backup device of determining the positions of support places of the backup device which supports a board at a support surface on a reverse side of a component mounting surface in mounting components on the board by an electronic component mounting apparatus, the method being characterized by comprising:

a superposed image display step of displaying a surface side image and a reverse side image which respectively show a surface side and a reverse side of the board having components mounted thereon, with the images being superposed, and of displaying components mounted on the surface side of the board and components mounted on the reverse side in visually different modes; and a support place position determination step of designating and determining the positions of the support places of the backup device on the superposed image being displayed at the superposed image display step.

2. The support place position determination method in the backup device as set forth in Claim 1, characterized in that at the superposed image display step, the components mounted on the surface side of the board and the components mounted on the reverse side of the board are displayed to be switched in display mode.

3. The support place position determination method in the backup device as set forth in Claim 1 or Claim 2, characterized by further comprising a determination inhibition step of inhibiting the determination at the support place position determination step if the position of any support place determined at the support place position determination step is within an area

which causes an interference with a component on the support surface.

4. A support place position determination device for determining the positions of support places of a backup device which supports a board at a support surface on a reverse side of a component mounting surface in mounting components, the device being characterized by comprising:

display means for displaying a surface side image and a reverse side image which respectively show a surface side and a reverse side of the board having components mounted thereon, with the images being superposed, and for displaying components mounted on the surface side of the board and components mounted on the reverse side in visually different modes; and support place position determination means for designating and determining the positions of the support places of the backup device on the superposed image being displayed by the display means.

5. A support place position determination aiding device comprising a display section control device for controllably displaying in a display section a surface side image and a reverse side image which respectively show a surface side and a reverse side of the board having components mounted thereon; a support place position designation device capable of designating the positions of support places of a backup device for supporting a board, at desired positions on the surface side image and/or the reverse side image being displayed in the display section; and a superposed image preparation device for superposing the surface side image and the reverse side image to prepare a superposed image; wherein the aiding device is characterized in that the display section control device controllably displays the surface side image and the reverse side image included in the superposed image in visually different modes.

6. A support place position determination method in a backup device of determining the positions of support places of the backup device which supports a board at a support surface on a reverse side of a component mounting surface in mounting components on the board by one or plural electronic component mounting apparatuses, the method being characterized by including:

a support place position determination step of designating and determining the positions of the support places of the backup device while setting each support place of the backup device to either a flexure preventing support place for preventing the flexure of the board or a particular component support place for supporting a particular component for which highly precise mounting is required.

7. The support place position determination method in the backup device as set forth in Claim 6, characterized by further including a support object component correlating step of correlating a support place which is set to the particular component support place at the support place position determination step, with information about a particular component to be supported by the support place.

8. The support place position determination method in the backup device as set forth in Claim 7, characterized by further including a support place position determination step dedicated to each electronic component mounting apparatus, wherein the dedicated support place position determination step is a step, independently executed in the associated electronic component mounting apparatus, of determining the positions of support places used in the associated electronic component mounting apparatus by reference to support place data and mounting component data,

the support place data being prepared through the support place position determination step and the support object component correlating step and being composed of positions relating to all the support places for supporting the board, setting states of the support places and support object components, and the mounting component data being for designating those components, whose mountings are to be performed by the associated electronic component mounting apparatus, of the components to be mounted on the board.

9. A support place position determination device for determining the positions of support places of a backup device which supports a board at a support surface on a reverse side of a component mounting surface in mounting components, the device being characterized by including:

support place position determination means for designating and determining the positions of the support places of the backup device while setting each support place of the backup device to either a flexure preventing support place for preventing the flexure of the board or a particular component support place for supporting a particular component for which highly precise mounting is required.